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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/828,660	04/06/2001	William R. Shaffer	5249-5112 150907	5705

7590 04/27/2004

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EXAMINER

TSAL, HENRY

ART UNIT	PAPER NUMBER
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2183

18

DATE MAILED: 04/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/828,660	SHAFFER, WILLIAM R.	
	Examiner	Art Unit	
	Henry W.H. Tsai	2183	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/20/03.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 38-44, 48-54 and 59-67 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 41, 42 and 64-67 is/are allowed.
- 6) ☒ Claim(s) 38-40, 43, 44, 48-54 and 59-63 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/3/01 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

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DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "216" (at page 13, line 4). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 38-40, 43, 44, 48-54, and 59-63 are rejected under 35 U.S.C. 102(b) as being anticipated by Naslund et al. (U.S.

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Patent No. 5,771,763), hereafter referred to as Naslund et al.'763.

Referring to claim 38, Naslund et al.'763 discloses as claimed a tool (1, see Fig. 1) comprising a cutting edge that extends from a lip end to a root end, the cutting edge (6, see Fig. 1) having a controlled hone (along the curvatures of radiuses R1 and R2, see Figs. 2 and 3) formed on it which defines a dimension at the tip end (5, see Fig. 2) different from a corresponding dimension defined the shape at the root end (7, see Fig. 3), at least a substantial portion of the controlled hone defining a surface continuously curved in cross section (see R1, and R2 formed on the surface continuously curved in cross sections, and W/H ratio is changing from the nose area 5 (Fig. 2) to the middle area 7 (Fig. 3). See also Col. 2, lines 38-44, and Col. 2, lines 57-62).

As to Claim 39, Naslund et al.'763 also discloses: the hone shape dimension varies continuously along the cutting edge from the tip end (5, see Fig. 2) to the root end (7, see Fig. 3). Note as set forth above. see R1, and R2 formed on the surface continuously curved in cross sections, and W/H ratio is changing from the nose area 5 (Fig. 2) to the middle area 7 (Fig. 3). See also Col. 2, lines 38-44, and Col. 2, lines 57-62).

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As to Claim 40, Naslund et al.'763 also discloses: the tool (1, see Fig. 1) is a threading tool and wherein the cutting edge (6, see Fig. 1) is a thread forming edge. Note the Naslund et al.'763's tool 1 is intended to be used in thread cutting, see also col. 2, line 10-14, regarding moving the workpiece to remove metal from the workpiece.

Referring to claim 43, Naslund et al.'763 discloses as claimed a tool (1, see Fig. 1) comprising a cutting edge (6, see Fig. 1) that extends from a first end (5, see Fig. 1) to a second end (7, see Fig. 1) and has an intermediate portion between the first and second ends, the cutting edge having a controlled hone (along the curvatures of radiuses R1 and R2, see Figs. 2 and 3) formed on it that defines at least one dimension that varies along the intermediate portion of the cutting edge from the first end to the second end at least a substantial portion of the controlled hone defining surface continuously curved in cross section (see R1, and R2 formed on the surface continuously curved in cross sections, and W/H ratio is changing from the nose area 5 (Fig. 2) to the middle area 7 (Fig. 3). See also Col. 2, lines 38-44, and Col. 2, lines 57-62).

As to Claim 44, Naslund et al.'763 also discloses: at least one dimension (R1 or R2, see Figs. 2 and 3) varies continuously (see Col. 2, lines 57-62, regarding successive transition

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between the nose area 5 and middle area 7 (main cutting edge)
from the first end to the second end.

As to Claim 48, Naslund et al.'763 also discloses: at least one dimension (R1 or R2, see Figs. 2 and 3) at the first end (5, see Fig. 1) is different from the corresponding dimension at the second end (7, see Fig. 1).

As to Claim 49, Naslund et al.'763 also discloses: the at least one dimension at the first end is the same as the corresponding dimension at the second end (note the ranges of W/H in Fig. 2 is between 1.5 to 2.2 , see Col. 2, lines 39-40, and 0.8-1.6, see Col. 2, lines 43-44, in Fig. 3 and inherently they can be the same), and the at least one dimension along the intermediate portion is different from the corresponding dimension at the first and second ends (as set forth above, see R1, and R2 formed on the surface continuously curved in cross sections, and W/H ratio is changing from the nose area 5 (Fig. 2) to the middle area 7 (Fig. 3). See also Col. 2, lines 38-44, and Col. 2, lines 57-62).

Referring to claim 50, Naslund et al.'763 discloses as claimed: a cutting edge (6, see Fig. 1) that extends from a first end (5, see Fig. 1) to a second end (7, see Fig. 1), and has an intermediate portion between the first end and the second

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end, the cutting edge having a controlled hone (along the curvatures of radiuses R1 and R2, see Figs. 2 and 3) formed on it, the hone having a first shape (see the shape comprising R1, R2, and W/H in Fig. 2) at the first end, a second shape (see the shape comprising R1, R2, and W/H in Fig. 3) at the second end, and an intermediate shape along the intermediate portion (as set forth above, see R1, and R2 formed on the surface continuously curved in cross sections, and W/H ratio is changing from the nose area 5 (Fig. 2) to the middle area 7 (Fig. 3). See also Col. 2, lines 38-44, and Col. 2, lines 57-62).

As to claim 51, Johnson also discloses: the first shape and the second shape are substantially the same (see Figs. 2 and 3).

As to claim 52, Johnson also discloses: the first shape and the second shape are substantially the same and the intermediate shape is variable between the first end and the second end (see Col. 2, lines 57-62, regarding successive transition between the nose area 5 and middle area 7 (main cutting edge)).

As to claim 53, Johnson also discloses: the intermediate shape varies continuously from the first end to the second end (see Col. 2, lines 57-62, regarding successive transition between the nose area 5 and middle area 7 (main cutting edge)).

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As to claim 54, Johnson also discloses: the first shape, the second shape, and the intermediate shape are all substantially the same (note the ranges of W/H in Fig. 2 is between 1.5 to 2.2 , see Col. 2, lines 39-40, and 0.8-1.6, see Col. 2, lines 43-44, in Fig. 3 and inherently they can be the same).

Referring to claim 59, Naslund et al.'763 discloses as claimed: a plurality of cutting edges (6 see Fig. 1) formed on a portion of the tool, each cutting edge having a controlled hone (along the curvatures of radiuses R1 and R2, see Figs. 2 and 3) formed on it; the magnitude of the hone on one edge being different than the magnitude of the hone on at least one other edge, at least a substantial portion of the controlled hone defining a surface continuously curved in cross section (as set forth above, see R1, and R2 formed on the surface continuously curved in cross sections, and W/H ratio is changing from the nose area 5 (Fig. 2) to the middle area 7 (Fig. 3). See also Col. 2, lines 38-44, and Col. 2, lines 57-62).

As to claim 60, Naslund et al.'763 also discloses: the magnitude of the hones on adjacent edges are different edge (as set forth above, see R1, and R2 formed on the surface continuously curved in cross sections, and W/H ratio is changing

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from the nose area 5 (Fig. 2) to the middle area 7 (Fig. 3).

See also Col. 2, lines 38-44, and Col. 2, lines 57-62).

As to claim 61, Naslund et al.'763 also discloses: the magnitude of the hone on an edge varies along at least a portion of the edge (as set forth above, see R1, and R2 formed on the surface continuously curved in cross sections, and W/H ratio is changing from the nose area 5 (Fig. 2) to the middle area 7 (Fig. 3). See also Col. 2, lines 38-44, and Col. 2, lines 57-62).

As to claim 62, Naslund et al.'763 also discloses: the shape of the hone is non-symmetrical on at least one edge (note the ranges of W/H in Fig. 2 is between 1.5 to 2.2 , see Col. 2, lines 39-40, and 0.8-1.6, see Col. 2, lines 43-44, in Fig. 3, the shapes are non-symmetrical).

As to claim 63, Naslund et al.'763 also discloses: the shape of the hone on one edge is different from the shape of the hone on at least one other edge (note the ranges of W/H in Fig. 2 is between 1.5 to 2.2 , see Col. 2, lines 39-40, and 0.8-1.6, see Col. 2, lines 43-44, in Fig. 3).

Allowable Subject Matter

4. Claims 41, 42, and 64-67 are allowed.

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5. The following is a statement of reasons for the indication of allowable subject matter: Naslund et al.'763 is the closest reference. However, Naslund et al.'763 does not teach or fairly suggest: the steps of: translating the tool parallel to the axis of rotation of the abrasive brush to form a hone having a second shape different from the first shape (claims 41 and 64); the steps of repositioning the cutting edge while translating the tool through the abrasive bristles to form a second portion of the cutting edge substantially parallel to the axis of rotation of the abrasive brush, the second portion of the cutting edge being different from the first shape (claim 42); translating the tool parallel to the axis of rotation of the abrasive brush to form a hone having a second portion of a dimension different from the first portion dimension (claims 65 and 67); and the steps of repositioning the cutting edge while translating the tool through the abrasive bristles to form a second portion of the cutting edge substantially parallel to the axis of rotation of the abrasive brush, the second portion defining a distention different from the first portion dimension (claim 66) in combination with the other limitations of the respective independent claims, and the combination is not obvious.

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Response to Arguments

6. Applicant's arguments mailed 11/20/03 have been considered but are moot in view of the new ground(s) of rejection.

Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Henry Tsai whose telephone number is (703) 308-7600. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner supervisor, Eddie Chan, can be reached on (703) 305-9712. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2100 receptionist whose telephone number is (703) 305-3900.

8. In order to reduce pendency and avoid potential delays, Group 2100 is encouraging FAXing of responses to Office actions directly into

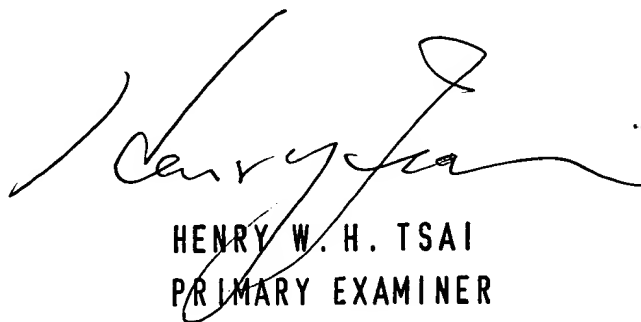
the Group at fax number: 703-872-9306.

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It may also be used for filing papers which require a fee by applicants who authorize charges to a PTO deposit account.

Please identify the examiner and art unit at the top of your cover sheet. Papers submitted via FAX into Group 2100 will be promptly forward to the examiner.



HENRY W. H. TSAI
PRIMARY EXAMINER

April 23, 2004